



## SEQUENCE LISTING

<110> GILL, PARKASH S.

<120> NOVEL INHIBITORS OF ANGIOGENESIS AND TUMOR GROWTH

<130> 13761-7011

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<151> 1999-07-12

<150> US 60/092,647

<151> 1998-07-13

<160> 59

<170> PatentIn 2.1

<210> 1

<211> 524

<212> PRT

<213> Homo sapiens

<220>

<223> prosaposin

<220>

<221> PEPTIDE

<222> (195)..(275)

<223> Saposin B

<400> 1

Met Tyr Ala Leu Phe Leu Leu Ala Ser Leu Leu Gly Ala Ala Leu Ala  
1 5 10 15

Gly Pro Val Leu Gly Leu Lys Glu Cys Thr Arg Gly Ser Ala Val Trp  
20 25 30

Cys Gln Asn Val Lys Thr Ala Ser Asp Cys Gly Ala Val Lys His Cys  
35 40 45

Leu Gln Thr Val Trp Asn Lys Pro Thr Val Lys Ser Leu Pro Cys Asp  
50 55 60

Ile Cys Lys Asp Val Val Thr Ala Ala Gly Asp Met Leu Lys Asp Asn  
65 70 75 80

Ala Thr Glu Glu Glu Ile Leu Val Tyr Leu Glu Lys Thr Cys Asp Trp  
85 90 95

Leu Pro Lys Pro Asn Met Ser Ala Ser Cys Lys Glu Ile Val Asp Ser  
100 105 110

Tyr Leu Pro Val Ile Leu Asp Ile Ile Lys Gly Glu Met Ser Arg Pro  
115 120 125

Gly Glu Val Cys Ser Ala Leu Asn Leu Cys Glu Ser Leu Gln Lys His  
 130 135 140  
 Leu Ala Glu Leu Asn His Gln Lys Gln Leu Glu Ser Asn Lys Ile Pro  
 145 150 155 160  
 Glu Leu Asp Met Thr Glu Val Val Ala Pro Phe Met Ala Asn Ile Pro  
 165 170 175  
 Leu Leu Leu Tyr Pro Gln Asp Gly Pro Arg Ser Lys Pro Gln Pro Lys  
 180 185 190  
 Asp Asn Gly Asp Val Cys Gln Asp Cys Ile Gln Met Val Thr Asp Ile  
 195 200 205  
 Gln Thr Ala Val Arg Thr Asn Ser Thr Phe Val Gln Ala Leu Val Glu  
 210 215 220  
 His Val Lys Glu Glu Cys Asp Arg Leu Gly Pro Gly Met Ala Asp Ile  
 225 230 235 240  
 Cys Lys Asn Tyr Ile Ser Gln Tyr Ser Glu Ile Ala Ile Gln Met Met  
 245 250 255  
 Met His Met Gln Pro Lys Glu Ile Cys Ala Leu Val Gly Phe Cys Asp  
 260 265 270  
 Glu Val Lys Glu Met Pro Met Gln Thr Leu Val Pro Ala Lys Val Ala  
 275 280 285  
 Ser Lys Asn Val Ile Pro Ala Leu Glu Leu Val Glu Pro Ile Lys Lys  
 290 295 300  
 His Glu Val Pro Ala Lys Ser Asp Val Tyr Cys Glu Val Cys Glu Phe  
 305 310 315 320  
 Leu Val Lys Glu Val Thr Lys Leu Ile Asp Asn Asn Lys Thr Glu Lys  
 325 330 335  
 Glu Ile Leu Asp Ala Phe Asp Lys Met Cys Ser Lys Leu Pro Lys Ser  
 340 345 350  
 Leu Ser Glu Glu Cys Gln Glu Val Val Asp Thr Tyr Gly Ser Ser Ile  
 355 360 365  
 Leu Ser Ile Leu Leu Glu Glu Val Ser Pro Glu Leu Val Cys Ser Met  
 370 375 380  
 Leu His Leu Cys Ser Gly Thr Arg Leu Pro Ala Leu Thr Val His Val  
 385 390 395 400  
 Thr Gln Pro Lys Asp Gly Gly Phe Cys Glu Val Cys Lys Lys Leu Val  
 405 410 415  
 Gly Tyr Leu Asp Arg Asn Leu Glu Lys Asn Ser Thr Lys Gln Glu Ile  
 420 425 430

A7

Leu Ala Ala Leu Glu Lys Gly Cys Ser Phe Leu Pro Asp Pro Tyr Gln  
           435                                  440                                  445  
 Lys Gln Cys Asp Gln Phe Val Ala Glu Tyr Glu Pro Val Leu Ile Glu  
           450                                  455                                  460  
 Ile Leu Val Glu Val Met Asp Pro Ser Phe Val Cys Leu Lys Ile Gly  
   465                                  470                                  475                                  480  
 Ala Cys Pro Ser Ala His Lys Pro Leu Leu Gly Thr Glu Lys Cys Ile  
                                   485                                  490                                  495  
 Trp Gly Pro Ser Tyr Trp Cys Gln Asn Thr Glu Thr Ala Ala Gln Cys  
                                   500                                  505                                  510  
 Asn Ala Val Glu His Cys Lys Arg His Val Trp Asn  
           515                                  520

<210> 2  
 <211> 81  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> Saposin B

<400> 2  
 Gly Asp Val Cys Gln Asp Cys Ile Gln Met Val Thr Asp Ile Gln Thr  
   1                                  5                                  10                                  15  
 Ala Val Arg Thr Asn Ser Thr Phe Val Gln Ala Leu Val Glu His Val  
                                   20                                  25                                  30  
 Lys Glu Glu Cys Asp Arg Leu Gly Pro Gly Met Ala Asp Ile Cys Lys  
           35                                  40                                  45  
 Asn Tyr Ile Ser Gln Tyr Ser Glu Ile Ala Ile Gln Met Met Met His  
   50                                  55                                  60  
 Met Gln Pro Lys Glu Ile Cys Ala Leu Val Gly Phe Cys Asp Glu Val  
   65                                  70                                  75                                  80

Lys

<210> 3  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: 5' primer for  
           amplifying Saposin B cDNA

<400> 3  
 attcgaattc aaggggacgt ttgccaggac tgc

<210> 4  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: 3' primer for  
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<400> 4  
 ttctgtgatg aggtgaaata gctcgagctc gag 33

<210> 5  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: 5' primer for  
 PCR amplification of Prosaposin

<400> 5  
 ctagatctag aaatgtacgc cctcttcctc ctggcc 36

<210> 6  
 <211> 36  
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 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: 3' primer for  
 PCR amplification of Prosaposin

<400> 6  
 ctcgagctcg agctagttcc acacatggcg tttgca 36

<210> 7  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: 5' primer for  
 PCR amplification of Saposin A

<400> 7  
 ctagatctag aatcccttcc ctgcgacata tcc 33

<210> 8  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

A7

<220>  
 <223> Description of Artificial Sequence: 3' primer for  
 PCR amplification of Saposin A  
  
 <400> 8  
 ctcgagctcg agtcacttct ggagagactc gcagag 36  
  
 <210> 9  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: 5' primer for  
 PCR amplification of Saposin C  
  
 <400> 9  
 ctagatctag aatctgatgt ttactgtgag gtg 33  
  
 <210> 10  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: 3' primer for  
 PCR amplification of Saposin C  
  
 <400> 10  
 ctcgagctcg agtcatgcca gagcagaggt gcagca 36  
  
 <210> 11  
 <211> 33  
 <212> DNA  
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 <223> Description of Artificial Sequence: 5' primer for  
 PCR amplification of Saposin D  
  
 <400> 11  
 ctagatctag aagacggtgg cttctgcgaa gtg 33  
  
 <210> 12  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: 3' primer for  
 PCR amplification of Saposin D  
  
 <400> 12  
 ctcgagctcg agtcacttat gggccgaggg gcaggc 36

A7

<210> 13  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic  
 polypeptide

<400> 13  
 Gln Pro Lys Asp Asn Gly Asp Val Cys Gln Asp Cys Ile Gln Val  
     1                    5                    10                    15

<210> 14  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic  
 polypeptide

<400> 14  
 Ile Gln Met Val Thr Asp Ile Gln Thr Ala Val Arg Thr Asn Ser Thr  
     1                    5                    10                    15

Phe

<210> 15  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: S23-R39  
 anti-angiogenic polypeptide

<400> 15  
 Ser Thr Phe Val Gln Ala Leu Val Glu His Val Lys Glu Glu Cys Asp  
     1                    5                    10                    15

Arg

<210> 16  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic  
 polypeptide

A7

&lt;400&gt; 16

Cys Asp Arg Leu Gly Pro Gly Met Ala Asp Lys Asn Tyr Ser  
 1 5 10

&lt;210&gt; 17

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Y51-P68  
 anti-angiogenic polypeptide

&lt;400&gt; 17

Tyr Ile Ser Gln Tyr Ser Glu Ile Ala Ile Gln Met Met Met His Met  
 1 5 10 15

Gln Pro

&lt;210&gt; 18

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: anti-angiogenic  
 polypeptide

&lt;400&gt; 18

Gln Met Met Met His Met Gln Pro Lys Glu Ile Cys Ala Leu Val Gly  
 1 5 10 15

&lt;210&gt; 19

&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: G1-V11  
 anti-angiogenic polypeptide

&lt;400&gt; 19

Gly Asp Val Cys Gln Asp Cys Ile Gln Met Val  
 1 5 10

&lt;210&gt; 20

&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: G1-(S4, S7)-V11  
 anti-angiogenic polypeptide

A7

<400> 20  
 Gly Asp Val Ser Gln Asp Ser Ile Gln Met Val  
       1                  5                  10

<210> 21  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: D2-V11  
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<400> 21  
 Asp Val Cys Gln Asp Cys Ile Gln Met Val  
       1                  5                  10

<210> 22  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: G1-Q5  
       anti-angiogenic polypeptide

<400> 22  
 Gly Asp Val Cys Gln  
       1                  5

<210> 23  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: D6-V12  
       anti-angiogenic polypeptide

<400> 23  
 Asp Cys Ile Gln Met Val  
       1                  5

<210> 24  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: D2-M10  
       anti-angiogenic polypeptide

A7



<400> 24  
 Asp Val Cys Gln Asp Cys Ile Gln Met  
     1                    5

<210> 25  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: D2-Q9  
         anti-angiogenic polypeptide

<400> 25  
 Asp Val Cys Gln Asp Cys Ile Gln  
     1                    5

<210> 26  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

A7  
 <220>  
 <223> Description of Artificial Sequence: D2-I8  
         anti-angiogenic polypeptide

<400> 26  
 Asp Val Cys Gln Asp Cys Ile  
     1                    5

<210> 27  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: D2-C7  
         anti-angiogenic polypeptide

<400> 27  
 Asp Val Cys Gln Asp Cys  
     1                    5

<210> 28  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: D2-D6  
         anti-angiogenic polypeptide

<400> 28

Asp Val Cys Gln Asp  
1 5

<210> 29

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: V3-V11  
anti-angiogenic polypeptide

<400> 29

Val Cys Gln Asp Cys Ile Gln Met Val  
1 5

<210> 30

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: C4-V11  
anti-angiogenic polypeptide

<400> 30

Cys Gln Asp Cys Ile Gln Met Val  
1 5

<210> 31

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Q5-V11  
anti-angiogenic polypeptide

<400> 31

Gln Asp Cys Ile Gln Met Val  
1 5

<210> 32

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: G1-(S4)-V11  
anti-angiogenic polypeptide

A7

<400> 32  
 Gly Asp Val Ser Gln Asp Cys Ile Gln Met Val  
       1                  5                  10

<210> 33  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: G1-(S7)-V11  
       anti-angiogenic polypeptide

<400> 33  
 Gly Asp Val Cys Gln Asp Ser Ile Gln Met Val  
       1                  5                  10

<210> 34  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: G1-(S4)-D6  
       anti-angiogenic polypeptide

<400> 34  
 Gly Asp Val Ser Gln Asp  
       1                  5

<210> 35  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: D2-(A3)-D6  
       anti-angiogenic polypeptide

<400> 35  
 Asp Ala Cys Gln Asp  
       1                  5

<210> 36  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: D2-(I3)-D6  
       anti-angiogenic polypeptide

A7

<400> 36

Asp Ile Cys Gln Asp  
1 5

<210> 37

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: D2-(L3)-D6  
anti-angiogenic polypeptide

<400> 37

Asp Leu Cys Gln Asp  
1 5

<210> 38

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: D2-(S5)-D6  
anti-angiogenic polypeptide

<400> 38

Asp Val Cys Ser Asp  
1 5

<210> 39

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: D2-(E5)-D6  
anti-angiogenic polypeptide

<400> 39

Asp Val Cys Glu Asp  
1 5

<210> 40

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: D2-(D5)-D6  
anti-angiogenic polypeptide

<400> 40  
 Asp Val Cys Asp Asp  
     1                    5

<210> 41  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Q67-E80  
         anti-angiogenic polypeptide

<400> 41  
 Gln Pro Lys Glu Ile Cys Ala Leu Val Gly Phe Cys Asp Glu Val Lys  
     1                    5                    10                    15

<210> 42  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: C37-S53  
         anti-angiogenic polypeptide

<400> 42  
 Cys Asp Arg Leu Gly Pro Gly Met Ala Lys Ile Cys Lys Asn Tyr Ile  
     1                    5                    10                    15

Ser

<210> 43  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Q9-F15  
         anti-angiogenic polypeptide

<400> 43  
 Gln Met Val Thr Asp Ile Gln Thr Gln Val Arg Thr Asn Ser Thr Phe  
     1                    5                    10                    15

<210> 44  
 <211> 70  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic  
         polypeptide

A7

<220>  
 <221> MOD\_RES  
 <222> (1)..(6)  
 <223> Xaa = any amino acid, Xaa at positions 1-6 may be present or absent

<220>  
 <221> MOD\_RES  
 <222> (12)..(70)  
 <223> Xaa = any amino acid, Xaa at positions 12-70 may be present or absent

<400> 44  
 Xaa Xaa Xaa Xaa Xaa Xaa Asp Val Cys Gln Asp Xaa Xaa Xaa Xaa Xaa  
     1                    5                    10                    15  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                     20                    25                    30  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                     35                    40                    45  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                     50                    55                    60  
 Xaa Xaa Xaa Xaa Xaa Xaa  
     65                    70

<210> 45  
 <211> 70  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic polypeptide

<220>  
 <221> MOD\_RES  
 <222> (1)..(5)  
 <223> Xaa = any amino acid, Xaa at positions 1-5 may range from 1-5 residues

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Xaa = Gly, Ala, Ser or Thr

<220>  
 <221> MOD\_RES  
 <222> (12)..(70)  
 <223> Xaa = any amino acid, Xaa at positions 12-70 may be present or absent

<400> 45  
 Xaa Xaa Xaa Xaa Xaa Xaa Asp Val Cys Gln Asp Xaa Xaa Xaa Xaa Xaa  
     1                    5                    10                    15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   20                  25                  30  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   35                  40                  45  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   50                  55                  60  
 Xaa Xaa Xaa Xaa Xaa Xaa  
                   65                  70

<210> 46  
 <211> 70  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic  
           polypeptide

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Xaa = variable amino acid

<220>  
 <221> MOD\_RES  
 <222> (12)..(70)  
 <223> Xaa = any amino acid, Xaa at positions 12-70 may  
           be present or absent

<400> 46  
 Gln Pro Lys Asp Asn Xaa Asp Val Cys Gln Asp Xaa Xaa Xaa Xaa Xaa  
   1                  5                  10                  15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   20                  25                  30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   35                  40                  45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   50                  55                  60

Xaa Xaa Xaa Xaa Xaa Xaa  
                   65                  70

<210> 47  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

A7

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic polypeptide

<220>  
 <221> MOD\_RES  
 <222> (1)..(6)  
 <223> Xaa = any amino acid, Xaa at positions 1-6 may be present or absent

<220>  
 <221> MOD\_RES  
 <222> (12)  
 <223> Xaa = any amino acid

<220>  
 <221> MOD\_RES  
 <222> (13)..(16)  
 <223> Xaa = any amino acid, Xaa at positions 13-16 may be present or absent

<400> 47  
 Xaa Xaa Xaa Xaa Xaa Xaa Asp Val Cys Gln Asp Xaa Xaa Xaa Xaa Xaa  
           1                          5                          10                          15

<210> 48  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic polypeptide

<220>  
 <221> MOD\_RES  
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 <223> Xaa = any amino acid, Xaa at positions 1-6 may be present or absent

<400> 48  
 Xaa Xaa Xaa Xaa Xaa Xaa Asp Val Cys Gln Asp Cys Ile Gln Met Val  
           1                          5                          10                          15

<210> 49  
 <211> 70  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic polypeptide

A7



<220>  
 <221> MOD\_RES  
 <222> (2)..(5)  
 <223> Xaa = any amino acid

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Xaa = Gly, Ala, Ser or Thr

<220>  
 <221> MOD\_RES  
 <222> (12)..(70)  
 <223> Xaa = any amino acid, Xaa at positions 12-70 may  
 be present or absent

<400> 49  
 Gln Xaa Xaa Xaa Xaa Xaa Asp Val Cys Gln Asp Xaa Xaa Xaa Xaa Xaa  
 1 5 10 15  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 20 25 30  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 35 40 45  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 50 55 60  
 Xaa Xaa Xaa Xaa Xaa Xaa  
 65 70

<210> 50  
 <211> 70  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic  
 polypeptide

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> Xaa = any amino acid, Xaa at position 1 may be  
 present or absent

<220>  
 <221> MOD\_RES  
 <222> (3)..(5)  
 <223> Xaa = any amino acid

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Xaa = Gly, Ala, Ser or Thr

<220>  
 <221> MOD\_RES  
 <222> (12)..(70)  
 <223> Xaa = any amino acid, Xaa at positions 12-70 may  
 be present or absent

<400> 50  
 Xaa Pro Xaa Xaa Xaa Xaa Asp Val Cys Gln Asp Xaa Xaa Xaa Xaa Xaa  
   1                  5                  10                  15  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   20                  25                  30  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   35                  40                  45  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   50                  55                  60  
 Xaa Xaa Xaa Xaa Xaa Xaa  
   65                  70

<210> 51  
 <211> 70  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic  
 polypeptide

<220>  
 <221> MOD\_RES  
 <222> (1)..(2)  
 <223> Xaa = any amino acid, Xaa at positions 1 and 2 may  
 be present or absent

<220>  
 <221> MOD\_RES  
 <222> (4)..(5)  
 <223> Xaa = any amino acid

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Xaa = Gly, Ala, Ser or Thr

<220>  
 <221> MOD\_RES  
 <222> (12)..(70)  
 <223> Xaa = any amino acid, Xaa at positions 12-70 may  
 be present or absent

<400> 51  
 Xaa Xaa Lys Xaa Xaa Xaa Asp Val Cys Gln Asp Xaa Xaa Xaa Xaa Xaa  
   1                  5                  10                  15

A7

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   20                                  25                                  30  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   35                                  40                                  45  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   50                                  55                                  60  
 Xaa Xaa Xaa Xaa Xaa Xaa  
                   65                                  70

<210> 52  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic  
           polypeptide

<220>  
 <221> MOD\_RES  
 <222> (1)..(3)  
 <223> Xaa = any amino acid, Xaa at positions 1-3 may be  
           present or absent

<220>  
 <221> MOD\_RES  
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 <223> Xaa = any amino acid

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Xaa = Gly, Ala, Ser or Thr

<220>  
 <221> MOD\_RES  
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 <223> Xaa = any amino acid, Xaa at positions 12-70 may  
           be present or absent

<400> 52  
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   1                                  5                                  10                                  15  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   20                                  25                                  30  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   35                                  40                                  45  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   50                                  55                                  60

A7

Xaa Xaa Xaa Xaa Xaa Xaa  
65 70

<210> 53  
<211> 70  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: anti-angiogenic  
polypeptide

<220>  
<221> MOD\_RES  
<222> (1)..(4)  
<223> Xaa = any amino acid, Xaa at positions 1-4 may be  
present or absent

<220>  
<221> MOD\_RES  
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<223> Xaa = Gly, Ala, Ser or Thr

<220>  
<221> MOD\_RES  
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<223> Xaa = any amino acid, Xaa at positions 12-70 may  
be present or absent

<400> 53  
Xaa Xaa Xaa Xaa Asn Xaa Asp Val Cys Gln Asp Xaa Xaa Xaa Xaa Xaa  
1 5 10 15  
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
20 25 30  
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45  
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Xaa Xaa Xaa Xaa Xaa Xaa  
65 70

<210> 54  
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<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: anti-angiogenic  
polypeptide

A7

<220>  
 <221> MOD\_RES  
 <222> (1)..(4)  
 <223> Xaa = any amino acid, Xaa at positions 1-4 may be present or absent

<220>  
 <221> MOD\_RES  
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 <223> Xaa = any amino acid

<220>  
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<220>  
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 <220>  
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 <222> (13)..(16)  
 <223> Xaa = any amino acid, Xaa at positions 13-16 may be present or absent

<400> 54  
 Xaa Xaa Xaa Xaa Xaa Xaa Asp Val Cys Gln Asp Xaa Xaa Xaa Xaa Xaa  
       1                              5                              10                              15

<210> 55  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic polypeptide

<220>  
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 <222> (1)..(4)  
 <223> Xaa = any amino acid, Xaa at positions 1-4 may be present or absent

<220>  
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<220>  
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 <223> Xaa = any amino acid, Xaa at positions 13-16 may  
 be present or absent

<400> 55  
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<210> 56  
 <211> 16  
 <212> PRT  
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<220>  
 <223> Description of Artificial Sequence: anti-angiogenic  
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 <221> MOD\_RES  
 <222> (1)..(4)  
 <223> Xaa = any amino acid, Xaa at positions 1-4 may be  
 present or absent

<220>  
 <221> MOD\_RES  
 <222> (5)  
 <223> Xaa = any amino acid

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Xaa = Gly, Ala, Ser or Thr

<220>  
 <221> MOD\_RES  
 <222> (12)  
 <223> Xaa = any amino acid

<220>  
 <221> MOD\_RES  
 <222> (14)..(16)  
 <223> Xaa = any amino acid, Xaa at positions 14-16 may  
 be present or absent

<400> 56  
 Xaa Xaa Xaa Xaa Xaa Xaa Asp Val Cys Gln Asp Xaa Ile Xaa Xaa Xaa  
       1                  5                  10                  15

<210> 57  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic polypeptide

<220>  
 <221> MOD\_RES  
 <222> (1)..(4)  
 <223> Xaa = any amino acid, Xaa at positions 1-4 may be present or absent

<220>  
 <221> MOD\_RES  
 <222> (5)  
 <223> Xaa = any amino acid

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Xaa = Gly, Ala, Ser or Thr

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 <220>  
 <221> MOD\_RES  
 <222> (12)..(13)  
 <223> Xaa = any amino acid

<220>  
 <221> MOD\_RES  
 <222> (15)..(16)  
 <223> Xaa = any amino acid, Xaa at positions 15 and 16 may be present or absent

<400> 57  
 Xaa Xaa Xaa Xaa Xaa Asp Val Cys Gln Asp Xaa Xaa Gln Xaa Xaa  
     1                    5                    10                    15

<210> 58  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: anti-angiogenic polypeptide

<220>  
 <221> MOD\_RES  
 <222> (1)..(4)  
 <223> Xaa = any amino acid, Xaa at positions 1-4 may be present or absent

<220>  
 <221> MOD\_RES  
 <222> (5)  
 <223> Xaa = any amino acid

